

Title (en)

Method and apparatus for determining IDDQ

Title (de)

Verfahren und Einrichtung zur Ruhestrombestimmung

Title (fr)

Procédé et dispositif pour déterminer le courant de repos

Publication

**EP 0840227 A1 19980506 (EN)**

Application

**EP 97307939 A 19971008**

Priority

US 74187996 A 19961030

Abstract (en)

IDDQ of an integrated circuit (105) is rapidly measured with system test equipment (101) providing sampled pass/fail outputs. A switch (304) couples the power supply to the integrated circuit and another switch (305) returns a sense signal input to the integrated circuit such that the power may be interrupted to measure the decay of the voltage across the integrated circuit. A monitor signal output is coupled to the integrated circuit to enable monitoring of the voltage decay. At least one processor (107), which periodically samples the voltage signal, compares the magnitude of the voltage signal at the time of each said periodic sample to a predetermined reference signal, indicates a voltage signal less than the reference signal and calculates the IDDQ based upon the number of periodic samples from the time power is removed from the integrated circuit and the voltage of the reference signal. <IMAGE>

IPC 1-7

**G06F 11/24**

IPC 8 full level

**G01R 31/26** (2006.01); **G01R 31/30** (2006.01); **G01R 31/319** (2006.01); **H01L 21/66** (2006.01); **H01L 21/8238** (2006.01); **H01L 27/092** (2006.01); **G01R 31/3193** (2006.01)

CPC (source: EP US)

**G01R 31/3004** (2013.01 - EP US); **G01R 31/3008** (2013.01 - EP US); **G01R 31/3193** (2013.01 - EP US)

Citation (search report)

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- [A] JOHNSON G H ET AL: "A GENERAL PURPOSE ATE BASED IDDQ MEASUREMENT CIRCUIT", PROCEEDINGS OF THE INTERNATIONAL TEST CONFERENCE (ITC), WASHINGTON, OCT. 21 - 25, 1995, 21 October 1995 (1995-10-21), INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, pages 97 - 105, XP000552812
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